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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
JARRETT, SCOTT L	
ART UNIT	**PAPER NUMBER**
3623	

DATE MAILED: 04/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/038,906	CHEN ET AL.	
	Examiner	Art Unit	
	Scott L. Jarrett	3623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 January 2002*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-13* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *08 January 2002* is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Title

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: Method for Determining an Actual Materials Production Order Based on Actual Demand, Forecasted Demand and Inventory Stock.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 2-3 and 12-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding Claim 2, Claim 2 recites the limitation "**the** Enterprise Resource Planning (ERP) server" in Claim 1. There is insufficient antecedent basis for this limitation in the claim.

Examiner interpreted the claim to read "**an** Enterprise Resource Planning (ERP) server" for the purposes of examination.

Further regarding Claim 2, Claim 2 recites the limitation "**the** client end" in Claim 1. There is insufficient antecedent basis for this limitation in the claim.

Examiner interpreted the claim to read "**a** client end" for the purposes of examination.

Further regarding Claim 2, Claim 2 recites the limitation "**the** enterprise end" in Claim 1. There is insufficient antecedent basis for this limitation in the claim.

Examiner interpreted the claim to read "**a** enterprise end" for the purposes of examination.

Regarding Claim 3, Claim 3 recites the limitation "**the** client end" in Claim 1. There is insufficient antecedent basis for this limitation in the claim.

Examiner interpreted the claim to read "**a** client end" for the purposes of examination.

Regarding Claim 12, Claim 12 recites the limitation "**the** predetermined interval" in Claim 1. There is insufficient antecedent basis for this limitation in the claim.

Examiner interpreted the claim to read "**a** predetermined interval" for the purposes of examination.

Regarding Claim 13, Claim 13 recites the limitation "**the** enterprise end" in Claim 1. There is insufficient antecedent basis for this limitation in the claim.

Examiner interpreted the claim to read "**a** enterprise end" for the purposes of examination.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Silver et al., Inventory Management and Production Planning and Scheduling (1998).

Regarding Claim 1 Silver et al. teach an inventory management system and method comprising (Paragraphs 1-2, Page 597; Bullet Numbers 1-4, Page 601; Section 5.4, Pages 604-609; Equation 15.1; Tables 7.7; 15.1-15.8; Figures 13.1, 15.2):

- delivering a production order of the day into a (material requirements planning) subsystem (system, code, module, server, device, etc.; production, gross requirements; Paragraph 1, Page 540; "Order entry, promise, followup", Element 4, Figures 13.1 and 15.2; "Production", Table 15.1-15.3, 15.8);

- generating an actual purchase order (net requirements; Last Paragraph, Page 602; Pages 605-606; Equation 5.1; Table 15.8);

- calculating a production order (gross requirements for current time period/interval) and a forecast order (gross requirements for future time period; Table 15.8; "forecasts", Bullet 4, Page 601);

- comparing (contrasting) a production order (production) and a forecast order (demand; Figure 13.2; "Demand Management", Element 2, Figure 13.1;Table 15.1; Figure 15.1; Paragraph 1, Page 594; Paragraph 1, Page 595);

- generating a forecasted purchase order (planned order releases; Table 15.8); and

- forecasting an upcoming production quantity and an upcoming shortage (project gross requirements; projected net inventory; Pages 607-608; Table 15.8).

Silver et al. does not expressly teach calculating the *difference* of a production order and a forecast order as claimed.

Official notice is taken that comparing (contrasting) actual to forecasted demand/production is old and very well known as providing a mechanism for determining (measuring, calculating, evaluating, etc.) the accuracy of production forecasts (i.e. forecasted demand – actual production/customer orders = forecast error).

It would have been obvious to one skilled in the art at the time of the invention that the system and method for managing inventory as taught by Silver et al. with its ability to capture forecasted demand/production and actual production (production order/releases) would have benefited from determining the *difference* between the production order and a forecast order in view of the teachings of official notice; the

resultant system enabling users to determine and adjust for the amount of error in production forecasts.

Regarding Claim 2 Silver et al. teach an inventory management system and method wherein the forecast order is generated by an Enterprise Resource Planning system (server, subsystem, etc.) based on procurement records provided by a client (user, system, device, etc.) to forecast required replenishment of quantities and material categories at a predetermined interval (Section 15.8, Page 620; Footnote, Page 602; Last Paragraph, Page 711).

Regarding Claim 3 Silver et al. teach an inventory management system and method wherein the production order relates to a build order placed by a client at a predetermined interval (Last Paragraph, Page 539; Paragraph 1 Page 540; Figures 13.1-13.2, 15.2; Table 15.5).

Regarding Claim 4 Silver et al. teach an inventory management system and method wherein delivering a production order comprises contrasting (comparing, subtracting, etc.) the production order with inventory stocks in a facility to generate a surplus stock and a shortage (stock-out; net requirements; Last Paragraph, Page 602; Pages 605-606; Equation 15.1; Table 15.8).

Regarding Claim 5 Silver et al. teach an inventory management system and method wherein the surplus stock relates to a quantity where quantity of the production order is fewer than that of the inventory stock of the facility (i.e. surplus stock is when the stock on hand is greater than the production order – inherently the definition of surplus; net requirements; Last Paragraph, Page 602; Pages 605-606; Equation 15.1; Table 15.8).

Regarding Claim 6 Silver et al. teach an inventory management system and method wherein the shortage relates to a quantity where the quantity of the production order is more than the inventory stock in a facility, as a base of the actual purchase order (the definition of a shortage; net requirements; Last Paragraph, Page 602; Pages 605-606; Equation 15.1; Table 15.8).

Regarding Claim 7 Silver et al. does not expressly teach utilizing a marker to avoid repeatedly calculating actual order while the actual order is being processed the next time as claimed.

Official notice is taken that marking (flagging, tagging, noting, etc.) a value that one does not wish to have recalculated each time a loop (recursion, etc.) is calculated is old and well known and commonly used when intermediate values are not required/desired and/or as a mechanism for reducing the "processing" requirements of the calculation (loop, algorithm, subroutine, etc.).

It would have been obvious to one skilled in the art at the time of the invention that the system and method for inventory control and management as taught by Silver et al. with its ability to calculate/determine a plurality of inventory values/parameters in either batch or near real-time (regenerative, net change, transaction/event driven, etc.; Last Paragraph, Page 611; Paragraphs 2-3, Page 612) would have benefited from marking (flagging, tagging, etc.) actual order in view of the teachings of official notice.

Regarding Claim 8 Silver et al. teach an inventory management system and method wherein the forecasted purchase order (planned order release) is the difference of the forecast order (gross requirement for next time interval/period) and the surplus stock (net requirements, planned order release; Page 609; Table 15.8; Equation 15.1).

Regarding Claim 9 Silver et al. teach an inventory management system and method wherein a production quantity (upcoming production quantity) and the shortage of the day (net requirements) both add up to be the amount of the production order (projected gross requirements; Pages 607-608; Table 15.8; Equation 15.1).

Regarding Claim 10 Silver et al. teach an inventory management system and method wherein the upcoming production quantity (project gross requirements) is based on received production orders at a predetermined interval and further to calculate the average (e.g. average demand; Paragraph 1, Page 203; Paragraph 1, Page 232).

Regarding Claim 11 Silver et al. teach an inventory management system and method wherein a predetermined interval relates to a time set up by the materials requirements planning subsystem (server) based on requests of various client ends (multiple time intervals/periods; Last Paragraph, Page 611; Paragraphs 1-2, Page 612; Tables 15.1, 15.8; Figure 15.1).

Regarding Claim 12 Silver et al. teach an inventory management system and method wherein the upcoming shortage (net requirement) is the sum of the actual purchase order (planned order receipts) and the forecasted purchase order (planned order releases; Pages 608-609; Table 15.8).

Regarding Claim 13 Silver et al. teach an inventory management system and method wherein the facility (system, plant, etc.) is to distinguish production demands of various product models (products) and implement received build orders at an enterprise end (aggregate order/production planning/forecasting; Last Paragraph, Page 548; Table 15.1; Figures 13.3 15.1; Figure 15.2, Element 1).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Kawashima et al., U.S. Patent No. 5,168,445, teach a system and method for managing and controlling production inventory stocks comprising forecasted production orders delivered to a materials requirements planning system, determining inventory levels, forecasting upcoming inventories (shortages) and generating a forecasted purchased order (replenishment) based on the demand and inventory stocks.

- Kagami et al., U.S. Patent No. 5,237,496, teach an inventory stock control and management system and method wherein inventory stock surplus/excess and shortages (deficiency) are forecasted.

- Caveney et al., U.S. Patent No. 5,608,621, teach an inventory stock management system and method comprising production forecast and inventory stock data and determining a forecasted purchase order (replenishment quantity) based on the forecasted unit demand as well as inventory and production levels.

- Dietrich et al., U.S. Patent No. 5,650,070, teach a manufacturing resource planning system and method comprising demand, inventory and production usage (actual production quantity).

- Johnson et al., U.S. Patent No. 5,712,989, teach a system and method for determining a forecasted purchase order (replenishment) based on inventory stock and production orders for multiple product models/types.

- Rand et al., U.S. Patent No. 6,960,414, teach an inventory management and control system and method for managing excess/surplus inventory, for the purposes of identifying excess materials on hand and excess materials on order, comprising: a materials requirements server (MRP, MRPII), demand forecasts/forecast orders, production orders and inventory stock data. Rand et al. further teach determining if the inventory stock is greater than the production order (i.e. surplus) as well as identifying/determining excess inventory stock after each generation (loop, iteration) of the MRP data wherein the existing excess inventory is stored in an excess inventory table enabling users to identify if the inventory value has already been determined (i.e. flagging the excess inventory values).

- Kasser, Pierre, U.S. Patent No. 6,078,800, teaches an inventory control and management system and method wherein the system/method accurately forecasts/estimates inventory stocks in a multi-echelon supply chain utilizing average demand forecast, inventory stock (shortage, backorder, etc.) and cost data.

- Gleditsch et al., U.S. Patent No. 6,393,332, teach an inventory management system and method for accurately controlling/managing inventory stock to ensure a business' ability to meet unanticipated demand. Gleditsch et al. further teach the old and well know utilization of material requirement planning systems/methods (MRP, MRPII) wherein such systems "determines the amounts and types of raw materials that must be on at a particular dates/times for a given manufacturing plant with given forecasted or actual orders" and are utilized to "determine future material requirements

and potential shortages due to changing conditions and unexpected events" as well as plan for/prevent excess materials from causing bottlenecks.

- Chiu et al., U.S. Patent Publication No. 2003/0088450, teach an inventory stock management and control system and method wherein inventory stock shortages are identified via data received by a materials requirements planning system from an enterprise resource planning system (build orders, shortage list, etc.).

- Renz et al., U.S. Patent Publication No. 2003/0093307, teach an inventory control and management system and method wherein the system/method determines forecasted demand and inventory stock levels in order to generate forecast purchase orders (replenishment) that minimize inventory without stock-outs/shortages (e.g. summing the inventory level, the demand level and the order level to obtain the order quantity).

- Jenkins et al., U.S. Patent Publication No. 2002/0188499, teach an inventory management and control system and method comprising forecasting production, planned product orders, actual production orders, released production orders, product orders (demand), unmet demand, inventory stock and inventory surplus/excesses and shortages as well as actual/forecasted purchase orders (replenishment, recommended shipments) to avoid shortages.

- Gould, Lawrence, Introduction APS (1998) teaches the well known evolution of materials requirement planning systems for inventory control and management starting from the early 1960s (MRP) to the 1980s (MRP II, added sales forecasts, integration with the rest of the enterprise) and eventually advanced planning systems in the 1990s

wherein APS systems/methods utilize a plurality of "dynamic" data including sales/demand, inventory and financials to schedule material and other resource capacities simultaneously.

- Hendrick et al., Production/Operations Management (1985) teach a plurality of old and well-known methods/systems for inventory control and management.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott L. Jarrett whose telephone number is (571) 272-7033. The examiner can normally be reached on Monday-Friday, 8:00AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hafiz Tariq can be reached on (571) 272-6729. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SJ
4/17/2006

Susanna Diaz

SUSANNA M. DIAZ
PRIMARY EXAMINER

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